

Testing Your Recall

name _____

date _____

1. Define the following terms:

- Mass

- Inertia

- Friction

2. Give two examples of inertia.

3. Describe Newton's first law of motion.

4. Why do some objects have more inertia than others?

5. What is necessary to put an object that is at rest in motion?

6. Once an object is in motion, what is an example of a force that would slow it down?

7. Would a moving object in outer space slow down? Why?

8. Use Newton's first law of motion to explain why you should wear a seat belt in a moving car.

Apply What You Learned

name _____

date _____

Read the passage and complete the instructions below.

The windmill made a sweeping turn, blowing a gentle breeze across the putting green. Hago Adams placed the bright yellow ball on the putting pad and took a deep breath. "Soon I will become the first person ever to beat Holly Enwon and take home the World Minigolf Championship trophy," he said to himself with a confident smile. "All that work to build a practice version of this final shot in my driveway at home will soon pay off big." Hago paused for a moment to recall how brilliantly he measured out the exact distance from putting pad to hole on a perfectly leveled area of his asphalt driveway. "Why, I even installed an exact replica of the big red and white windmill. I've been able to practice this shot a thousand times. I know exactly how hard to hit the ball to make it go the correct distance to ace a hole in one."

Hago hit the ball with the same force he had used in his practice course. The crowd held its breath as the ball rolled gently over the bright green synthetic grass. Hago closed his eyes to wait for the beautiful sound of the golf ball sinking perfectly into the little black plastic hole. He raised his arms to accept the crowd's cheer when... "Ohhhh!" the crowd gasped. Hago opened his eyes to see the ball roll to a gentle stop several inches in front of the hole. "Impossible!" he cried.

1. In your own words, describe the problem above.

2. What went wrong? Use the words force and friction to explain to Hago why you think he didn't get a hole-in-one.

3. Hago has vowed to try to win again next year. The minigolf course management, however, is considering replacing the current synthetic grass with green carpet, clay, or some other grass substitute. There is no way of knowing what the course surface will be like for the next championship tournament. How would you help Hago set up his practice course to train to win?